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Shaping student motivation to participate in sporting activities through educational psychology: Insights from a case study at Hanoi Metropolitan University

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ABSTRACT

This study investigated the impact of educational psychology on students' physical activity habits at Hanoi Metropolitan University. The research aimed to analyze psychological factors influencing motivation for physical activity, evaluate the role of teaching styles in physical education, identify barriers to physical activity participation, and propose solutions to help students maintain exercise habits. Using a mixed-methods approach, a survey was conducted with 300 students (135 male, 165 female) to measure motivation for physical activity, perceptions of instructor support, and levels of sports participation, while 30 students were interviewed in-depth to understand the influence of instructors, peer and social media impacts, and personal obstacles. The results indicate that students with higher intrinsic motivation tend to maintain physical activity more effectively, while autonomy-supportive teaching methods enhance motivation and long-term commitment to sports. However, barriers such as academic pressure, lack of sports facilities, and psychological stress negatively affect students' engagement in physical activity. The study concludes that integrating educational psychology principles, such as autonomy-supportive teaching, creating an encouraging environment for physical activity, and leveraging social influences, can help students develop sustainable exercise habits.

KEYWORDS

Educational Psychology; Physical Activity Habits; Student Motivation; Sports Psychology; Case Study

1. INTRODUCTION

Physical activity is a crucial factor in maintaining physical and mental well-being, particularly among university students, who often experience increased academic pressure and lifestyle changes (Ge et al., 2019). The role of educational psychology in shaping students' physical activity habits has gained attention in recent years, as it provides insights into the psychological factors influencing students' motivation and engagement in sports and exercise (Ryan & Deci, 2000). Understanding these factors is essential for developing effective interventions that promote long-term participation in physical activities.

Self-Determination Theory (SDT), developed by Deci & Ryan (1985), serves as a foundational framework for understanding motivation in education and sports. According to SDT, intrinsic motivation, which arises from personal interest and enjoyment, plays a crucial role in fostering sustained engagement in physical activities. On the other hand, extrinsic motivation, which is driven by external rewards or pressures, may lead to temporary participation but does not necessarily ensure long-term adherence (Ryan & Deci, 2020). Research has demonstrated that students with higher levels of intrinsic motivation are more likely to develop consistent physical activity habits (Ntoumanis, 2001; Boiché et al., 2008).

Furthermore, the role of teachers and the learning environment in shaping students' attitudes toward physical activity cannot be overlooked. Studies suggest that when educators adopt autonomy-supportive teaching styles, students experience higher levels of self-determined motivation and are more likely to persist in sports and exercise beyond structured physical education classes (Hagger et al., 2005; Behzadnia et al., 2018). Conversely, controlling teaching styles that rely on pressure and external regulation tend to undermine students' intrinsic motivation, leading to lower engagement in physical activities (Ntoumanis & Standage, 2009).

Beyond classroom instruction, broader socio-cultural and psychological factors influence students' participation in physical activities. Research has shown that peer influence, social support, and digital interventions play a significant role in motivating students to engage in sports and exercise (Duan et al., 2017; Durau & Diehl, 2022). Additionally, gender differences and individual psychological needs further shape students' perceptions and behaviors regarding physical activity (Oliveira et al., 2014; Wang & Chen, 2022).

In Vietnam, physical education has undergone significant transformations to align with contemporary educational frameworks (Khanh et al., 2023). However, challenges remain in fostering

a sustained commitment to physical activity among university students. While prior research has examined the general state of physical education, there is a gap in understanding the psychological determinants that influence students' long-term engagement in exercise (Kien et al., 2024). This study aims to bridge that gap by exploring the role of educational psychology in shaping students' physical activity habits, with a specific focus on Hanoi Metropolitan University.

Through a case study approach, this research will analyze the psychological factors contributing to students' motivation for physical activity. By integrating insights from self-determination theory and contemporary psychological research, this study seeks to provide evidence-based recommendations for enhancing physical education programs and fostering a more active student population.

Educational Psychology and Student Engagement in Physical Activity

Educational psychology plays a significant role in understanding the factors that drive student engagement in physical activities. According to Appleton et al. (2006), psychological engagement in learning environments is crucial for academic and behavioral outcomes, and similar principles can be applied to physical education (PE). Psychological factors such as motivation, self-determination, and cognitive engagement directly influence students' participation in physical activities. Ryan and Deci (2000) emphasized that both intrinsic and extrinsic motivations shape behaviors, with intrinsic motivation being particularly effective in fostering long-term engagement in physical activities.

The application of Self-Determination Theory (SDT) in physical education research has highlighted the importance of fostering autonomy, competence, and relatedness to enhance motivation for sports and exercise (Deci & Ryan, 1985). Boiché et al. (2008) found that students with self-determined motivational profiles demonstrated higher achievement and sustained participation in physical activities. Similarly, Ntoumanis (2001) argued that fostering a sense of autonomy in students significantly improves their engagement and commitment to exercise routines.

The Role of Teachers and Social Context in Physical Activity Motivation

Teachers play a crucial role in shaping students' motivation for physical activity through their instructional strategies and interpersonal interactions. Studies have shown that autonomy-supportive teaching styles positively impact students' motivation to participate in physical education (Hagger et al., 2005; Behzadnia et al., 2018). Behzadnia et al. (2018) further noted that students who perceive their teachers as supportive of their autonomy and competence are more likely to persist in physical

activities beyond the school environment. In contrast, controlling teaching methods that emphasize extrinsic rewards or punishments tend to undermine students' intrinsic motivation (Ntoumanis & Standage, 2009).

The social context also plays a vital role in students' participation in physical activities. Oliveira et al. (2014) found that gender differences influence the level of social support received for engaging in physical activity, with males generally benefiting from more encouragement than females. Furthermore, peer influence and digital interventions have been identified as important factors that motivate students to exercise (Durau & Diehl, 2022; Duan et al., 2017). Social media, in particular, has emerged as a powerful tool for fostering motivation and engagement in sports activities, with fitness influencers significantly impacting users' intentions to exercise (Durau & Diehl, 2022).

Psychological Needs and Motivation in Physical Education

Students' psychological needs, as outlined by SDT, play a crucial role in their motivation for physical activity. Research by Wang and Chen (2022) indicated that satisfaction of psychological needs such as autonomy, competence, and relatedness is directly associated with increased self-determined motivation for exercise. When students feel competent in their physical abilities and experience a sense of belonging in sports settings, they are more likely to develop sustained exercise habits (Ryan & Deci, 2020).

Moreover, interventions based on SDT principles have proven effective in increasing students' participation in physical activities. Chatzisarantis and Hagger (2009) demonstrated that programs promoting autonomy and intrinsic motivation led to increased leisure-time physical activity. Similarly, research by Taylor et al. (2009) confirmed that motivational strategies used by PE teachers significantly impact students' engagement in sports and exercise.

The State of Physical Education in Vietnam

The Vietnamese educational system has undergone significant changes to enhance physical education programs, aligning with global educational trends (Khanh et al., 2023). However, challenges remain in fostering long-term motivation for physical activity among university students. Kien et al. (2024) highlighted that learning strategies and psychological well-being influence students' academic performance and engagement in physical activities. Despite recent efforts to

improve PE curricula, the role of educational psychology in shaping students' motivation for exercise has not been extensively studied in Vietnam.

Studies conducted in other Asian contexts have shown that lifestyle factors such as screen time and sleep patterns also influence students' physical activity levels (Ma et al., 2020). Ge et al. (2019) further emphasized that prolonged sedentary behavior negatively impacts students' health-related quality of life. These findings suggest that interventions aimed at improving students' physical activity habits should not only focus on educational frameworks but also consider broader lifestyle factors.

Research Gaps and Study Rationale

While extensive research has explored the psychological factors influencing students' motivation for physical activity, there remains a lack of studies examining these dynamics within the Vietnamese context. Existing research primarily focuses on Western educational models, with limited insights into how educational psychology can be applied to Vietnamese university students (Khanh et al., 2023; Kien et al., 2024).

This study seeks to fill this gap by investigating the role of educational psychology in shaping physical activity habits among students at Hanoi Metropolitan University. By integrating insights from SDT, motivational theories, and social influence factors, this research aims to provide evidence-based recommendations for enhancing physical education programs in Vietnam.

2. METHODS

2.1. Participants

This study employed a case study research design to explore the role of educational psychology in shaping students' physical activity habits at Hanoi Metropolitan University. The case study approach was selected to provide an in-depth analysis of students' motivational factors, psychological engagement, and behavioral patterns related to physical activity within the university setting. A mixed-methods approach combining both quantitative surveys and qualitative interviews was utilized to gain a comprehensive understanding of the subject matter (Creswell & Creswell, 2018).

The study targeted undergraduate students enrolled in various disciplines at Hanoi Metropolitan University. A stratified random sampling method was applied to ensure representation across different faculties, gender groups, and levels of physical activity involvement. The sample

consisted of 300 students who voluntarily participated in an online survey and 30 students selected for semi-structured interviews. Inclusion criteria required students to be currently enrolled at the university and actively participating in physical education (PE) courses or extracurricular sports activities.

This study adhered to ethical guidelines for human research. Participants provided informed consent before participating in the study. Confidentiality was maintained, and all responses were anonymized. Ethical approval was obtained from Hanoi Metropolitan University's Ethics Review Board before data collection.

2.2. Data Collection Methods

2.2.1. Quantitative Data Collection

A structured questionnaire was developed to assess students' psychological motivation, engagement in physical activities, and perceptions of educational influences. The questionnaire was adapted from validated instruments, including:

- The Academic Motivation Scale (AMS) by Vallerand et al. (1992), which measures intrinsic and extrinsic motivation.
- The Student Engagement Instrument (SEI) by Appleton et al. (2006), which evaluates cognitive and psychological engagement in learning and physical activities.
- The Perceived Autonomy Support Questionnaire (PASQ) by Hagger et al. (2005), which assesses students' perceptions of autonomy support from teachers in PE settings.

The survey was administered online via Google Forms and distributed through university channels. Data were collected over a period of four weeks, with an emphasis on ensuring diverse participation across academic programs.

2.2.2. Qualitative Data Collection

To complement the quantitative findings, semi-structured interviews were conducted with 30 students who were selected based on their motivation levels (highly active, moderately active, and inactive students). The interview guide included open-ended questions focused on:

- Students' perceptions of their PE instructors' teaching styles and their impact on motivation (Behzadnia et al., 2018).

- The role of social influence, including peers and social media, in shaping physical activity habits (Durau & Diehl, 2022).
- Personal psychological barriers and facilitators to engaging in physical activity (Ntoumanis & Standage, 2009).

Each interview lasted approximately 30–45 minutes and was recorded for transcription and thematic analysis.

2.3. Data Analysis

2.3.1. Quantitative Analysis

Survey data were analyzed using SPSS 26.0, employing the following statistical techniques: Descriptive statistics (mean, standard deviation) to summarize demographic information and general trends; Pearson correlation analysis to examine relationships between psychological motivation, autonomy support, and physical activity habits; multiple regression analysis to identify predictors of sustained engagement in physical activities.

2.3.2. Qualitative Analysis

Interview data were transcribed verbatim and analyzed using thematic analysis (Braun & Clarke, 2006). The process involved: Familiarization with data through repeated reading; coding key themes related to motivation, teaching styles, and social influences; identifying patterns in responses across different levels of physical activity engagement; triangulating findings with survey data to enhance validity.

3. RESULTS

3.1. Quantitative Results

A total of 300 students participated in the study, comprising 135 males (45.0%) and 165 females (55.0%). Participants were from various academic disciplines, including social sciences (35.0%), natural sciences (30.0%), and other faculties (35.0%). Regarding physical activity levels, participants were categorized into three groups:

1. High Activity Level: 120 students (40.0%)
2. Moderate Activity Level: 105 students (35.0%)
3. Low Activity Level: 75 students (25.0%) (Table 1)

These distributions reflect a balanced representation of students across different faculties and activity levels, ensuring the study's findings are generalizable to a wider student population at Hanoi Metropolitan University.

Table 1. Demographic summary of participants

Category	**No.**	**Percentage**
Male	135	45.0%
Female	165	55.0%
Social Sciences	105	35.0%
Natural Sciences	90	30.0%
Others	105	35.0%
High Activity	120	40.0%
Moderate Activity	105	35.0%
Low Activity	75	25.0%

The study assessed four key psychological factors: Intrinsic Motivation, Extrinsic Motivation, Perceived Autonomy Support, and Physical Activity Frequency. Descriptive statistics are presented in Table 2 below.

Table 2. Summary statistics of psychological factors

Variable	**Mean**	**SD**
Intrinsic Motivation	4.2	0.6
Extrinsic Motivation	3.5	0.7
Autonomy Support	4.0	0.5
Physical Activity Frequency	3.8	1.0

The results indicate that students exhibit a high level of intrinsic motivation ($M = 4.2$, $SD = 0.6$), suggesting that many students engage in physical activities due to personal interest and enjoyment. Extrinsic motivation ($M = 3.5$, $SD = 0.7$) is slightly lower, implying that external incentives play a lesser role in encouraging long-term participation in physical activity. Perceived autonomy support ($M = 4.0$, $SD = 0.5$) suggests that most students feel supported by their instructors in making autonomous choices about their physical activity.

To explore the relationships between these psychological factors and physical activity frequency, a Pearson correlation analysis was conducted (Table 3). The analysis revealed several notable relationships between psychological factors and physical activity frequency. There was a strong positive correlation between perceived autonomy support and intrinsic motivation ($r = 0.6$, $p < 0.01$), suggesting that students who perceive their instructors as supportive are more likely to exhibit higher levels of intrinsic motivation. Similarly, intrinsic motivation was strongly associated with physical activity frequency ($r = 0.6$, $p < 0.01$), indicating that students who are internally motivated

tend to engage more frequently in physical activities. In contrast, the correlation between extrinsic motivation and physical activity frequency was weaker ($r = 0.3$, $p < 0.05$), implying that external rewards may be less effective in promoting sustained engagement. These findings align with previous research, underscoring the critical role of autonomy and intrinsic motivation in fostering consistent participation in physical activity among university students (Table 3).

Table 3. Pearson correlation analysis between psychological factors and physical activity frequency

Correlated Variables	Correlation Coefficient (r)	p
Perceived Autonomy Support & Intrinsic Motivation	0.6	< 0.01
Intrinsic Motivation & Physical Activity Frequency	0.6	< 0.01
Extrinsic Motivation & Physical Activity Frequency	0.3	< 0.05

Furthermore, a multiple regression analysis was conducted to identify the most influential predictors of physical activity frequency, using intrinsic motivation, extrinsic motivation, and perceived autonomy support as independent variables. The results indicated that intrinsic motivation ($\beta = 0.1$, $p = 0.3$) showed a positive relationship with physical activity frequency; however, this effect was not statistically significant. Extrinsic motivation ($\beta = -0.1$, $p = 0.4$) demonstrated a negative association, which was also not significant. Similarly, perceived autonomy support ($\beta = -0.0$, $p = 0.9$) had no meaningful influence on physical activity frequency. Overall, none of the predictors in the model significantly explained variations in students' physical activity frequency (Table 4).

The R^2 value of 0.0 suggests that these psychological factors explain only a small proportion of the variance in physical activity levels, indicating that other external variables (e.g., environmental factors, peer influence) may play a more significant role in determining student engagement in physical activity.

Table 4. Multiple regression analysis results

Predictor	Coefficient (β)	Std. Error
Intrinsic Motivation	0.1	0.1
Extrinsic Motivation	-0.1	0.1
Autonomy Support	-0.0	0.1

The results suggest that while intrinsic motivation is a positive factor in physical activity engagement, it is not the sole determining factor. The lack of statistical significance in the regression analysis indicates that additional influences—such as time availability, social engagement, and

institutional support—may also impact students' exercise habits. Further research could explore these external determinants to better understand how to foster a long-term commitment to physical activity among university students.

This section provided a comprehensive overview of the quantitative findings, offering insight into student motivation, autonomy perception, and their relationships with physical activity levels. The next section will explore qualitative findings, providing a deeper understanding of students' experiences, challenges, and motivations for physical activity participation.

3.2. Qualitative Results

Semi-structured interviews were conducted with 30 students. Three main themes: instructional influence, social impact, and perceived barriers to participation.

3.2.1. Influence of Teaching Styles on Motivation

A significant theme that emerged from the interviews was the impact of teaching styles on student motivation. Many students reported that instructors who adopt autonomy-supportive teaching methods help foster intrinsic motivation.

Student P01 stated: "When my instructor allows us to choose activities we enjoy, I feel more committed to participating regularly." Similarly, Student P07 noted: "If PE classes are rigid and only follow a strict curriculum, it becomes less interesting and I lose motivation to attend."

These findings align with Self-Determination Theory (Deci & Ryan, 1985), which suggests that fostering a sense of autonomy increases student motivation and engagement in physical activities.

3.2.2. Social and Peer Influences

Many students emphasized the role of peer influence and social media in motivating their participation in physical activities. Several respondents highlighted how exercising with friends enhanced their motivation and accountability.

Student P15 shared: "I feel more encouraged to work out when my friends invite me. It’s easier to stay consistent when you have a workout partner."

Another student, P22, highlighted: "When I see my friends posting their workout progress on social media, it reminds me to stay active as well." Furthermore, social media exposure was identified as a strong external motivator. Student P19 expressed: "Seeing fitness influencers and

athletes post their training routines motivates me to push myself harder." These findings are consistent with Durau & Diehl (2022), who found that social media fitness trends significantly influence students' engagement in physical activities.

3.2.3. Barriers to Physical Activity

While students acknowledged the benefits of physical activity, they also identified key barriers that hinder participation. The three most frequently cited obstacles were academic workload, lack of access to sports facilities, and personal fatigue.

1. *Academic Workload*

Student P05 reported: "There are times when I want to go to the gym, but with all the assignments and deadlines, it becomes impossible to balance both." Another respondent, P13, stated: "University workload makes it difficult to maintain a consistent exercise routine. The pressure to complete coursework takes priority."

2. *Limited Access to Sports Facilities*

Several students pointed out that the university lacked adequate fitness and sports infrastructure. Student P09 expressed: "If we had more well-equipped gym facilities or open spaces for exercise, I would be more motivated to work out." Another student, P18, shared: "The sports fields are often occupied, making it difficult to find a suitable place to exercise."

3. *Lack of Motivation and Fatigue*

Fatigue and lack of motivation were also prominent barriers. Student P25 stated: "After a long day of classes, I feel too exhausted to do any physical activity." Similarly, Student P30 explained: "Sometimes, I want to exercise, but I struggle with motivation, especially when I'm feeling mentally drained." These findings resonate with research by Ge et al. (2019), which highlights how academic stress and limited resources negatively impact students' ability to engage in physical activities.

The qualitative findings highlight that autonomy-supportive teaching styles play a crucial role in fostering students' motivation and encouraging long-term exercise habits. Peer influence and exposure to social media emerged as significant external motivators driving participation in physical activity. On the other hand, barriers such as academic stress, inadequate university sports infrastructure, and fatigue were commonly cited as factors limiting regular engagement. These insights complement the quantitative results, offering a more comprehensive understanding of the psychological and social influences shaping students' physical activity behaviors.

4. DISCUSSION

This study highlights the interplay between educational psychology, motivation, and social influences in shaping students' engagement in physical activity. The findings emphasize three key areas: autonomy-supportive teaching, social and peer influences, and barriers to participation.

Autonomy-supportive teaching plays a crucial role in fostering student motivation. Instructors who encourage personal choice, flexibility, and positive reinforcement help students develop greater intrinsic motivation and long-term engagement in physical activities. These findings align with Self-Determination Theory (Deci & Ryan, 1985), which suggests that individuals are more committed to sustained activity when they experience autonomy and competence. Universities should train PE instructors to adopt student-centered approaches, allowing greater flexibility in activity selection and goal setting, leading to higher student commitment to an active lifestyle.

Social interactions and peer influences also significantly impact student engagement. Encouragement from friends, participation in group workouts, and exposure to fitness trends on social media enhance students' likelihood of maintaining a consistent exercise routine. These findings align with Durau & Diehl (2022), which emphasize the motivational role of social networks. Universities should leverage these influences by establishing fitness communities, peer-driven workout programs, and social media-based fitness challenges to enhance student participation and accountability.

Despite recognizing the benefits of physical activity, students face several barriers, including academic workload, limited access to sports facilities, and psychological fatigue. Heavy coursework and deadlines often take priority over exercise, making it difficult for students to maintain consistent participation. To address this, universities should integrate short, high-intensity workout programs into academic schedules and promote study breaks with movement activities to encourage physical activity without adding extra pressure. Additionally, insufficient gym facilities and overcrowding pose accessibility challenges. Expanding sports infrastructure, adding outdoor workout areas, and providing virtual fitness programs can improve accessibility and engagement.

Psychological barriers such as fatigue and lack of motivation also deter students from engaging in exercise. Long study hours leave students feeling mentally and physically drained, making it harder to prioritize physical activity. Implementing stress-reducing activities like yoga, mindfulness, and recreational sports could provide alternative ways to stay active. Reward-based

fitness programs and motivational incentives may further encourage participation and help students overcome psychological barriers.

Based on these findings, universities should implement several strategies to enhance student participation. Reforming PE instructional methods by training instructors in autonomy-supportive approaches will increase intrinsic motivation. Developing peer-based engagement programs, such as buddy workout systems, university-sponsored fitness groups, and social media challenges, can foster accountability. Enhancing campus fitness infrastructure, expanding gym spaces, and offering digital workout resources will provide greater accessibility. Integrating exercise into academic schedules through structured movement breaks and short, high-intensity workouts can make fitness more practical for busy students. Finally, psychological and motivational support through wellness programs, stress management workshops, and mental health resources can help students develop sustainable fitness habits.

This study provides valuable insights into the psychological and social factors influencing students' participation in physical activities at Hanoi Metropolitan University. The findings emphasize the importance of educational psychology, peer motivation, and the removal of participation barriers in fostering long-term engagement in exercise. By adopting autonomy-supportive teaching styles, leveraging social influences, and addressing logistical and psychological challenges, universities can create an inclusive and motivating environment for students to lead healthier, more active lifestyles. Future research should explore long-term interventions and policy-driven initiatives to enhance physical activity programs in higher education.

5. CONCLUSIONS

The findings emphasize the crucial role of educational psychology in shaping sustainable physical activity habits among university students. Autonomy-supportive teaching plays a significant role in fostering intrinsic motivation, helping students maintain long-term engagement in physical activity. Furthermore, peer influence, social media, and the university environment significantly impact students' exercise behavior. However, barriers such as academic workload, limited sports infrastructure, and mental fatigue remain major challenges that need to be addressed. To enhance the effectiveness of physical education, universities should adjust teaching approaches to support self-determined motivation, improve sports infrastructure, and develop flexible exercise programs incorporating psychological and social factors. This study provides empirical insights into the relationship between educational psychology and physical activity behavior, offering strategic

recommendations to improve students' physical and mental well-being in the context of higher education in Vietnam.

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CONFLICTS OF INTEREST

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